



# DUNBAR-CRFR

2:1 SHRINK RATIO, NEOPRENE, FLEXIBLE, FLAME RETARDENT, TUBING

## Applications

DUNBAR-CRFR is used for insulation, strain relief, and abrasion protection on cable harnesses and wire bundles in military and aerospace industries. It provides fluid and solvent resistance, including lubricating oil, aviation and ground-vehicle fuels and hydraulic fluids. Neoprene remains flexible at low temperatures

## Features

- ★ Shrink ratio: approx. 50% in the radial direction  
+1%, -10% or less in the axial direction
- ★ In stock for immediate shipment
- ★ Continuous operating temperature: -70°C (-94°F) to 121°C (250°F)
- ★ Flammability: ASTM D2671 Procedure A, C
- ★ Excellent abrasion protection for military industries

## Standards

- ★ SAE AS23053/1 Class 1 & 2 (Formerly AMS-DTL-23053/1 Class 1 and Class 2)
- ★ Declared Dimensional Life (DDL) – 5 Years
- ★ RoHS & REACH Compliant

## Specification Values

| Properties |                      | Test Methods                      | Values                         |                                 |
|------------|----------------------|-----------------------------------|--------------------------------|---------------------------------|
| Physical   | Unaged               | Tensile strength                  | Min. 1500 psi                  |                                 |
|            |                      | Elongation                        | Min. 225%                      |                                 |
|            |                      | Tensile strength @200% Elongation | Max. 1500 psi                  |                                 |
|            | Aged                 | Tensile strength                  | ASTM D412                      | Min. 1200 psi                   |
|            |                      | Elongation                        |                                | Min. 175%                       |
|            | Fluid Resist.        | Tensile strength                  | 24°C/24 hrs                    | Min. 1000 psi                   |
|            |                      | Elongation                        | 6 Fluids                       | Min. 175%                       |
|            |                      | Dielectric strength               |                                | Min. 250Volts/mil               |
|            | Low temperature flex |                                   | -70°Cx4hrs                     | No cracks                       |
|            | Heat shock           |                                   | 200°Cx4hrs                     | No cracks, flowing, or dripping |
| Electrical | Dielectric strength  | ASTM D2671                        | Min. 300Volts/mil              |                                 |
|            | Volume resistivity   | ASTM D876                         | Min. 1x10 <sup>11</sup> Ω - cm |                                 |
| Chemical   | Copper corrosion     | 150°C/16hrs                       | No corrosion                   |                                 |
|            | Fungus resistance    | ASTM G21                          | No Growth                      |                                 |
|            | Water Absorption     | ASTM D570                         | Max. 1.0                       |                                 |
|            | Flammability         | ASTM D2671                        | Pass                           |                                 |

Rev. April 2023



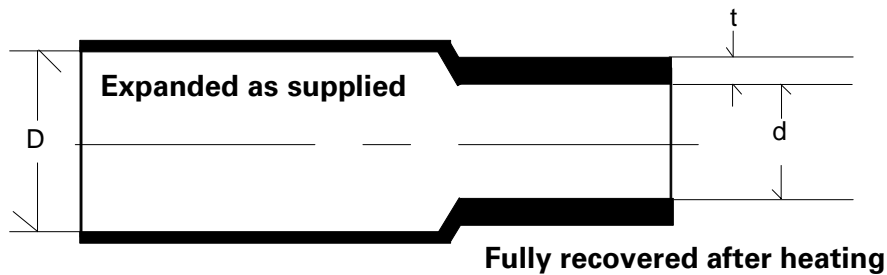
Dunbar Products, LLC  
Tubing and Identification Products

1302 Champion Circle, Carrollton, TX 75006  
Tel: (469) 568-0800  
Fax: (469) 568-0808



# DUNBAR-CRFR

2:1 SHRINK RATIO, NEOPRENE, FLEXIBLE, FLAME RETARDENT, TUBING



## Product Dimensions

Minimum Shrink Temperature: 135°C

| Size      | Expanded                        |      | Recovered                       |      |                                  |     | Standard Spool Length |
|-----------|---------------------------------|------|---------------------------------|------|----------------------------------|-----|-----------------------|
|           | Internal Diameter (Minimum) (D) |      | Internal Diameter (Maximum) (d) |      | Nominal Total Wall Thickness (t) |     |                       |
| Inch Size | In.                             | mm   | In.                             | mm   | In.                              | mm  | Ft.                   |
| 1/8"      | 0.125                           | 3.2  | 0.062                           | 1.6  | 0.028                            | 0.7 | 500                   |
| 3/16"     | 0.188                           | 4.8  | 0.093                           | 2.4  | 0.030                            | 0.7 | 250                   |
| 1/4"      | 0.250                           | 6.4  | 0.143                           | 3.6  | 0.035                            | 0.9 | 250                   |
| 3/8"      | 0.375                           | 9.5  | 0.211                           | 5.4  | 0.040                            | 1.0 | 100                   |
| 1/2"      | 0.500                           | 12.7 | 0.286                           | 7.3  | 0.048                            | 1.2 | 100                   |
| 5/8"      | 0.625                           | 15.9 | 0.357                           | 9.1  | 0.052                            | 1.3 | 100                   |
| 3/4"      | 0.750                           | 19.1 | 0.428                           | 10.9 | 0.057                            | 1.4 | 100                   |
| 7/8"      | 0.875                           | 22.2 | 0.500                           | 12.7 | 0.065                            | 1.7 | 100                   |
| 1"        | 1.00                            | 25.4 | 0.570                           | 14.5 | 0.070                            | 1.8 | 100                   |
| 1-1/4"    | 1.25                            | 31.8 | 0.714                           | 18.1 | 0.087                            | 2.2 | 100                   |
| 1-1/2"    | 1.5                             | 38.1 | 0.857                           | 21.8 | 0.095                            | 2.4 | 100                   |

Standard Color: Black

Rev. April 2023



Dunbar Products, LLC  
Tubing and Identification Products

1302 Champion Circle, Carrollton, TX 75006  
Tel: (469) 568-0800  
Fax: (469) 568-0808